CLAIM AMENDMENTS

1-54. (Canceled)

55. A compound of the formula I*

$$X^{2}$$

$$X^{3}$$

$$X^{3}$$

$$X^{4}$$

$$R^{5}$$

$$R^{4}$$

$$R^{5}$$

$$R^{1}$$

$$R^{2}$$

$$R^{3*}$$

$$R^{4}$$

enantiomers, diasteriomers and pharmaceutically acceptable salts thereof, wherein

X¹, X² and X³, together with the atoms to which they are bonded, form a ring selected from:

$$\mathbb{R}^7$$
 \mathbb{N}
 \mathbb{N}

 R^1 , R^2 , R^5 , R^6 and R^7 are independently selected from groups of the formula $-(CH_2)_n-(Z^1)_m-(CH_2)_p-Z^2$;

- Z¹ is -CZ³Z⁴-, -O-, -NZ³-, -S-, -SO-, -SO₂-, -C(O)-, -C(O)Z³-, -C(O)NZ⁴, -C(S)-, -C(=NOZ³)-, alkyl, substituted alkyl, alkenyl, substituted alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo;
- Z^2 is hydrogen; $-OZ^5$, $-OC(O)Z^5$, $-NZ^5-C(O)-Z^6$, $-NZ^5-CO_2-Z^6$, $-NZ^5(C=O)-NZ^6Z^7$, $-NZ^5Z^6$, $-NO_2$, halo, -CN, $-C(O)Z^5$, $-CO_2Z^5$, $-C(S)Z^5$, $-(C=NOZ^5)Z^6$, $-C(O)NZ^5Z^6$, $-C(S)NZ^5Z^6$, $-SZ^5$, $-SO_2Z^5$, $-SO_2NZ^5Z^6$, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo;

- Z³, Z⁴, Z⁵, Z⁶ and Z⁷ are independently hydrogen, halo, alkyl, substituted alkyl, alkenyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo; or
- Z³, Z⁴, Z⁵, Z⁶ and Z⁷ may, in one or more pairs of two, together with the atoms to which they are bonded, form a carbocyclic, substituted carbocyclic, heterocyclic or substituted heterocyclic group;
- R^{3*} is -OZ⁵, -OC(O)-Z⁵, -NZ⁵-C(O)₂-Z⁶, -NZ⁵(C=O)-NZ⁶Z⁷, -NZ⁵Z⁶, -(C=NOZ⁵)Z⁶, -C(O)NZ^{5*}Z^{6*}, -C(S)NZ^{5*}Z^{6*}, -SZ⁵, -SOZ⁵, -SO²Z⁵, -SO₂NZ⁵Z⁶, -C(O)Z^{3*}-Z^{2*}, halo, alkyl, substituted alkyl, alkenyl, substituted alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo or substituted heterocylco;
- Z^{2*} is other than hydrogen when Z^{3*} is heterocyclo;
- Z³* is heterocyclo or substituted heterocyclo;
- Z⁵* is substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo; and
- Z^{6*} is hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo, provided that Z^{6*} is not hydrogen when Z^{5*} is unsubstituted cycloalkyl, unsubstituted aryl, or unsubstituted benzyl; or Z^{5*} and Z^{6*} may together with the nitrogen atom to which they are bonded form a heterocyclic group or substituted heterocyclic group, provided that Z^{5*} and Z^{6*} do not together form unsubstituted piperidinyl, unsubstituted pyrrolidinyl, or unsubstituted morpholinyl;
- n and p are independently selected from integers from 0 to 10 wherein, when m is 0, p is also 0;

m is an integer selected from 0 or 1; and q is an integer selected from 1 to 3.

56. (New) A compound of claim 20 wherein

R^{3*} is heterocyclo; substituted heterocyclo; -C(O)NZ^{5*}Z^{6*},

- $-C(O)Z^{3*}-C(O)NZ^{5}Z^{6}$, $-C(O)Z^{3*}-CO_{2}Z^{5}$, $-C(O)Z^{3*}-(aryl)$,
- -C(O)Z^{3*}-(substituted aryl), -C(O)Z^{3*}-(heterocyclo), or
- -C(O)Z^{3*}-(substituted heterocyclo).

57. (New) A compound of claim 21 wherein

R1 is H; and

R² is aryl, substituted aryl, heterocyclo, substituted heterocyclo, carbocyclo or substituted carbocyclo.

- 58. (New) A compound of claim 20 wherein R^{3*} is heterocyclo or substituted heterocyclo.
- 59. (New) A compound of claim 23 wherein

R¹ is H; and

R² is aryl, substituted aryl, heterocyclo, substituted heterocyclo, carbocyclo or substituted carbocyclo.

60. (New) A method of treating atrial arrhythmias comprising administering to a patient in need thereof an effective amount of at least one compound of formula I

$$X^{2}$$

$$X^{3}$$

$$X^{3}$$

$$X^{3}$$

$$X^{4}$$

$$X^{5}$$

$$X^{5}$$

$$X^{1}$$

$$X^{3}$$

$$X^{4}$$

$$X^{5}$$

$$X^{5}$$

$$X^{6}$$

$$X^{7}$$

$$X^{7}$$

$$X^{1}$$

$$X^{1}$$

$$X^{2}$$

$$X^{3}$$

$$X^{4}$$

$$X^{5}$$

$$X^{5}$$

$$X^{7}$$

$$X^{1}$$

$$X^{2}$$

$$X^{3}$$

$$X^{4}$$

$$X^{5}$$

$$X^{5}$$

$$X^{7}$$

$$X^{7$$

enantiomers, diasteriomers or pharmaceutically acceptable salts thereof, wherein

 X^1 , X^2 and X^3 , together with the atoms to which they are bonded, form a ring selected from:

$$\mathbb{R}^7$$
 \mathbb{R}^7
 \mathbb{R}^7
 \mathbb{R}^7
 \mathbb{R}^7
 \mathbb{R}^7

 R^1 , R^2 , R^5 , R^6 and R^7 are independently selected from groups of the formula $-(CH_2)_n-(Z^1)_m-(CH_2)_p-Z^2$;

- Z¹ is -CZ³Z⁴-, -O-, -NZ³-, -S-, -SO-, -SO₂-, -C(O)-, -C(O)Z³-, -C(O)NZ⁴, -C(S)-, -C(=NOZ³)-, alkyl, substituted alkyl, alkenyl, substituted alkynyl, substituted alkynyl, substituted aryl, heterocyclo, or substituted heterocyclo;
- Z² is hydrogen; -OZ⁵, -OC(O)Z⁵, -NZ⁵-C(O)-Z⁶, -NZ⁵-CO₂-Z⁶, -NZ⁵(C=O)-NZ⁶Z⁶, -NZ⁵Z⁶, -NO₂, halo, -CN, -C(O)Z⁵, -CO₂Z⁵, -C(S)Z⁵, -(C=NOZ⁵)Z⁶, -C(O)NZ⁵Z⁶, -C(S)NZ⁵Z⁶, -SZ⁵, -SOZ⁵, -SO₂Z⁵, -SO₂NZ⁵Z⁶, alkyl, substituted alkyl, alkenyl, substituted alkynyl, substituted alkynyl, substituted aryl, heterocyclo, or substituted heterocyclo;
- Z³, Z⁴, Z⁵, Z⁶ and Z⁷ are independently hydrogen, halo, alkyl, substituted alkyl, alkenyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo; or
- Z³, Z⁴, Z⁵, Z⁶ and Z⁻ may, in one or more pairs of two, together with the atoms to which they are bonded, form a carbocyclic, substituted carbocyclic, heterocyclic or substituted heterocyclic group;
- R^{3*} is -OZ⁵, -OC(O)-Z⁵, -NZ⁵-C(O)₂-Z⁶, -NZ⁵(C=O)-NZ⁶Z⁷, -NZ⁵Z⁶, -(C=NOZ⁵)Z⁶, -C(O)NZ^{5*}Z^{6*}, -C(S)NZ^{5*}Z^{6*}, -SZ⁵, -SOZ⁵, -SO²Z⁵, -SO₂NZ⁵Z⁶, -C(O)Z^{3*}-Z^{2*}, halo, alkyl, substituted alkyl, alkenyl, substituted alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo or substituted heterocylco;
- Z^{2*} is other than hydrogen when Z^{3*} is heterocyclo;
- Z³* is heterocyclo or substituted heterocyclo;
- Z^{5*} is substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo; and
- Z⁶* is hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo, provided that Z⁶* is not hydrogen when Z⁵* is unsubstituted cycloalkyl, unsubstituted aryl, or unsubstituted benzyl; or Z⁵* and Z⁶* may together with the nitrogen atom to which they are bonded form a
 - heterocyclic group or substituted heterocyclic group, provided that Z⁵* and Z⁶* do not together form unsubstituted piperidinyl, unsubstituted pyrrolidinyl, or unsubstituted morpholinyl;
- n and p are independently selected from integers from 0 to 10 wherein, when m is 0, p is also 0;

m is an integer selected from 0 or 1; and q is an integer selected from 1 to 3.

- 61. (New) A method of claim 1 wherein the atrial arrhythmia is atrial fibrillation.
- 62. (New) A method of claim 1 wherein the atrial arrhythmia is atrial flutter.
- 63. (New) A method of controlling heart rate comprising administering to a patient in need thereof an effective amount of at least one compound of formula I

$$\begin{array}{c|c}
 & R^1 & R^2 \\
 & X^1 & R^{3*} \\
 & X^3 & R^4 \\
 & & R^5 & R^4
\end{array}$$
(I*)

enantiomers, diasteriomers or pharmaceutically acceptable salts thereof, wherein

X¹, X² and X³, together with the atoms to which they are bonded, form a ring selected from:

$$\mathbb{R}^7$$
 \mathbb{R}^7
 \mathbb{R}^8
 \mathbb{R}^7
 \mathbb{R}^7
 \mathbb{R}^7
 \mathbb{R}^7

 R^1 , R^2 , R^5 , R^6 and R^7 are independently selected from groups of the formula $-(CH_2)_n-(Z^1)_m-(CH_2)_p-Z^2$;

R4 is alkyl or substituted alkyl;

Z¹ is -CZ³Z⁴-, -O-, -NZ³-, -S-, -SO-, -SO₂-, -C(O)-, -C(O)Z³-, -C(O)NZ⁴, -C(S)-, -C(=NOZ³)-, alkyl, substituted alkyl, alkenyl, substituted alkynyl, substituted alkynyl, substituted aryl, heterocyclo, or substituted heterocyclo;

- Z² is hydrogen; -OZ⁵, -OC(O)Z⁵, -NZ⁵-C(O)-Z⁶, -NZ⁵-CO₂-Z⁶, -NZ⁵(C=O)-NZ⁶Z⁻, -NZ⁵Z⁶, -NO₂, halo, -CN, -C(O)Z⁵, -CO₂Z⁵, -C(S)Z⁵, -(C=NOZ⁵)Z⁶, -C(O)NZ⁵Z⁶, -C(S)NZ⁵Z⁶, -SZ⁵, -SOZ⁵, -SO₂Z⁵, -SO₂NZ⁵Z⁶, alkyl, substituted alkyl, alkenyl, substituted alkynyl, substituted alkynyl, substituted aryl, heterocyclo, or substituted heterocyclo;
- Z³, Z⁴, Z⁵, Z⁶ and Z⁻ are independently hydrogen, halo, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo; or
- Z³, Z⁴, Z⁵, Z⁶ and Z⁻ may, in one or more pairs of two, together with the atoms to which they are bonded, form a carbocyclic, substituted carbocyclic, heterocyclic or substituted heterocyclic group;
- R^{3*} is -OZ⁵, -OC(O)-Z⁵, -NZ⁵-C(O)₂-Z⁶, -NZ⁵(C=O)-NZ⁶Z⁷, -NZ⁵Z⁶, -(C=NOZ⁵)Z⁶, -C(O)NZ^{5*}Z^{6*}, -C(S)NZ^{5*}Z^{6*}, -SZ⁵, -SOZ⁵, -SO²Z⁵, -SO₂NZ⁵Z⁶, -C(O)Z^{3*}-Z^{2*}, halo, alkyl, substituted alkyl, alkenyl, substituted alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo or substituted heterocylco;
- Z^{2*} is other than hydrogen when Z^{3*} is heterocyclo;
- Z³* is heterocyclo or substituted heterocyclo;
- Z⁵* is substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo; and
- Z⁶* is hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo, provided that Z⁶* is not hydrogen when Z⁵* is unsubstituted cycloalkyl, unsubstituted aryl, or unsubstituted benzyl; or Z⁵* and Z⁶* may together with the nitrogen atom to which they are bonded form a heterocyclic group or substituted heterocyclic group, provided that Z⁵* and Z⁶* do not together form unsubstituted piperidinyl, unsubstituted pyrrolidinyl, or unsubstituted morpholinyl;
- n and p are independently selected from integers from 0 to 10 wherein, when m is 0, p is also 0;
- m is an integer selected from 0 or 1; and q is an integer selected from 1 to 3.

64. (New) A method of treating gastrointestinal disorders comprising administering to a patient in need thereof an effective amount of at least one compound of formula I

$$X^{1}$$

$$X^{2}$$

$$X^{3}$$

$$X^{3}$$

$$X^{4}$$

$$X^{5}$$

$$X^{5}$$

$$X^{4}$$

$$X^{5}$$

$$X^{6}$$

$$X^{7}$$

$$X^{8}$$

$$X^{7}$$

$$X^{8}$$

$$X^{7}$$

$$X^{1}$$

$$X^{2}$$

$$X^{3}$$

$$X^{4}$$

$$X^{5}$$

$$X^{5}$$

enantiomers, diasteriomers or pharmaceutically acceptable salts thereof, wherein

X¹, X² and X³, together with the atoms to which they are bonded, form a ring selected from:

$$\mathbb{R}^7$$
 \mathbb{R}^6
 \mathbb{R}^7
 \mathbb{R}^6
 \mathbb{R}^7
 \mathbb{R}^7
 \mathbb{R}^7

 R^1 , R^2 , R^5 , R^6 and R^7 are independently selected from groups of the formula - $(CH_2)_n$ - $(Z^1)_m$ - $(CH_2)_p$ - Z^2 ;

R⁴ is alkyl or substituted alkyl;

0

- Z¹ is -CZ³Z⁴-, -O-, -NZ³-, -S-, -SO-, -SO₂-, -C(O)-, -C(O)Z³-, -C(O)NZ⁴, -C(S)-, -C(=NOZ³)-, alkyl, substituted alkyl, alkenyl, substituted alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo;
- Z² is hydrogen; -OZ⁵, -OC(O)Z⁵, -NZ⁵-C(O)-Z⁶, -NZ⁵-CO₂-Z⁶, -NZ⁵(C=O)-NZ⁶Z⁷, -NZ⁵Z⁶, -NO₂, halo, -CN, -C(O)Z⁵, -CO₂Z⁵, -C(S)Z⁵, -(C=NOZ⁵)Z⁶, -C(O)NZ⁵Z⁶, -C(S)NZ⁵Z⁶, -SZ⁵, -SOZ⁵, -SO₂Z⁵, -SO₂NZ⁵Z⁶, alkyl, substituted alkyl, alkenyl, substituted alkynyl, substituted alkynyl, substituted aryl, heterocyclo, or substituted heterocyclo;
- Z³, Z⁴, Z⁵, Z⁶ and Z⁻ are independently hydrogen, halo, alkyl, substituted alkyl, alkenyl, substituted alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo; or

- Z³, Z⁴, Z⁵, Z⁶ and Z⁵ may, in one or more pairs of two, together with the atoms to which they are bonded, form a carbocyclic, substituted carbocyclic, heterocyclic or substituted heterocyclic group;
- R^{3*} is -OZ⁵, -OC(O)-Z⁵, -NZ⁵-C(O)₂-Z⁶, -NZ⁵(C=O)-NZ⁶Z⁷, -NZ⁵Z⁶, -(C=NOZ⁵)Z⁶, -C(O)NZ^{5*}Z^{6*}, -C(S)NZ^{5*}Z^{6*}, -SZ⁵, -SOZ⁵, -SO²Z⁵, -SO₂NZ⁵Z⁶, -C(O)Z^{3*}-Z^{2*}, halo, alkyl, substituted alkyl, alkenyl, substituted alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo or substituted heterocylco;
- Z^{2*} is other than hydrogen when Z^{3*} is heterocyclo;
- Z³* is heterocyclo or substituted heterocyclo;
- Z⁵* is substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo; and
- Z^{6*} is hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo, provided that Z^{6*} is not hydrogen when Z^{5*} is unsubstituted cycloalkyl, unsubstituted aryl, or unsubstituted benzyl; or Z^{5*} and Z^{6*} may together with the nitrogen atom to which they are bonded form a heterocyclic group or substituted heterocyclic group, provided that Z^{5*} and Z^{6*} do not together form unsubstituted piperidinyl, unsubstituted pyrrolidinyl, or unsubstituted morpholinyl;
- n and p are independently selected from integers from 0 to 10 wherein, when m is 0, p is also 0;
- m is an integer selected from 0 or 1; and q is an integer selected from 1 to 3.
- 65. (New) The method of claim 6 wherein the gastrointestingal disorder is reflux esophagitis.
- 66. (New) The method of claim 6 wherein the gastrointestinal disorder is motility disorders.
- 67. (New) A method of treating inflammatory or immunological disease comprising administering to a patient in need thereof an effective amount of at least one compound of formula I*

$$X^{2}$$

$$X^{3}$$

$$X^{3}$$

$$X^{4}$$

$$X^{5}$$

$$X^{5}$$

$$X^{6}$$

$$X^{7}$$

$$X^{8}$$

$$X^{7}$$

$$X^{8}$$

$$X^{7}$$

$$X^{8}$$

$$X^{7}$$

$$X^{8}$$

$$X^{1}$$

$$X^{2}$$

$$X^{3}$$

$$X^{4}$$

$$X^{5}$$

$$X^{5}$$

enantiomers, diasteriomers or pharmaceutically acceptable salts thereof, wherein

X¹, X² and X³, together with the atoms to which they are bonded, form a ring selected from:

$$\mathbb{R}^7$$
 \mathbb{R}^6
 \mathbb{R}^7
 \mathbb{R}^7
 \mathbb{R}^7
 \mathbb{R}^7
 \mathbb{R}^7

 R^1 , R^2 , R^5 , R^6 and R^7 are independently selected from groups of the formula - $(CH_2)_n$ - $(Z^1)_m$ - $(CH_2)_p$ - Z^2 ;

- Z¹ is -CZ³Z⁴-, -O-, -NZ³-, -S-, -SO-, -SO₂-, -C(O)-, -C(O)Z³-, -C(O)NZ⁴, -C(S)-, -C(=NOZ³)-, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo;
- Z² is hydrogen; -OZ⁵, -OC(O)Z⁵, -NZ⁵-C(O)-Z⁶, -NZ⁵-CO₂-Z⁶, -NZ⁵(C=O)-NZ⁶Z⁷, -NZ⁵Z⁶, -NO₂, halo, -CN, -C(O)Z⁵, -CO₂Z⁵, -C(S)Z⁵, -(C=NOZ⁵)Z⁶, -C(O)NZ⁵Z⁶, -C(S)NZ⁵Z⁶, -SZ⁵, -SOZ⁵, -SO₂Z⁵, -SO₂NZ⁵Z⁶, alkyl, substituted alkyl, alkenyl, substituted alkynyl, substituted alkynyl, substituted aryl, heterocyclo, or substituted heterocyclo;
- Z³, Z⁴, Z⁵, Z⁶ and Z⁷ are independently hydrogen, halo, alkyl, substituted alkyl, alkenyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo; or
- Z³, Z⁴, Z⁵, Z⁶ and Z⁷ may, in one or more pairs of two, together with the atoms to which they are bonded, form a carbocyclic, substituted carbocyclic, heterocyclic or substituted heterocyclic group;

R^{3*} is -OZ⁵, -OC(O)-Z⁵, -NZ⁵-C(O)₂-Z⁶, -NZ⁵(C=O)-NZ⁶Z⁷, -NZ⁵Z⁶, -(C=NOZ⁵)Z⁶, -C(O)NZ^{5*}Z^{6*}, -C(S)NZ^{5*}Z^{6*}, -SZ⁵, -SOZ⁵, -SO²Z⁵, -SO₂NZ⁵Z⁶, -C(O)Z^{3*}-Z^{2*}, halo, alkyl, substituted alkyl, alkenyl, substituted alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo or substituted heterocylco;

 Z^{2*} is other than hydrogen when Z^{3*} is heterocyclo;

Z³* is heterocyclo or substituted heterocyclo;

Z⁵* is substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo; and

Z⁶* is hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo, provided that Z⁶* is not hydrogen when Z⁵* is unsubstituted cycloalkyl, unsubstituted aryl, or unsubstituted benzyl; or Z⁵* and Z⁶* may together with the nitrogen atom to which they are bonded form a

or Z^{5*} and Z^{6*} may together with the nitrogen atom to which they are bonded form a heterocyclic group or substituted heterocyclic group, provided that Z^{5*} and Z^{6*} do not together form unsubstituted piperidinyl, unsubstituted pyrrolidinyl, or unsubstituted morpholinyl;

n and p are independently selected from integers from 0 to 10 wherein, when m is 0, p is also 0;

m is an integer selected from 0 or 1; and q is an integer selected from 1 to 3.

- 68. (New) The method of claim 67 wherein the disease is chronic obstructive pulmonary disease.
- 69. (New) A method of treating diabetes comprising administering to a person in need thereof an effective amount of at least one compound of formula I*

$$X^{2}$$

$$X^{3}$$

$$X^{3}$$

$$R^{4}$$

$$R^{5}$$

$$R^{1}$$

$$R^{2}$$

$$R^{3*}$$

$$R^{4}$$

enantiomers, diasteriomers or pharmaceutically acceptable salts thereof, wherein

X¹, X² and X³, together with the atoms to which they are bonded, form a ring selected from:

$$\mathbb{R}^7$$
 \mathbb{R}^6
 \mathbb{R}^7
 \mathbb{R}^7
 \mathbb{R}^7
 \mathbb{R}^7
 \mathbb{R}^7

 R^1 , R^2 , R^5 , R^6 and R^7 are independently selected from groups of the formula $-(CH_2)_n-(Z^1)_m-(CH_2)_n-Z^2$;

R⁴ is alkyl or substituted alkyl;

- Z¹ is -CZ³Z⁴-, -O-, -NZ³-, -S-, -SO-, -SO₂-, -C(O)-, -C(O)Z³-, -C(O)NZ⁴, -C(S)-, -C(=NOZ³)-, alkyl, substituted alkyl, alkenyl, substituted alkynyl, substituted alkynyl, substituted aryl, heterocyclo, or substituted heterocyclo;
- Z² is hydrogen; -OZ⁵, -OC(O)Z⁵, -NZ⁵-C(O)-Z⁶, -NZ⁵-CO₂-Z⁶, -NZ⁵(C=O)-NZ⁶Z⁶, -NZ⁵Z⁶, -NO₂, halo, -CN, -C(O)Z⁵, -CO₂Z⁵, -C(S)Z⁵, -(C=NOZ⁵)Z⁶, -C(O)NZ⁵Z⁶, -C(S)NZ⁵Z⁶, -SZ⁵, -SOZ⁵, -SO₂Z⁵, -SO₂NZ⁵Z⁶, alkyl, substituted alkyl, alkenyl, substituted alkynyl, substituted alkynyl, substituted aryl, heterocyclo, or substituted heterocyclo;
- Z³, Z⁴, Z⁵, Z⁶ and Z⁻ are independently hydrogen, halo, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo; or
- Z³, Z⁴, Z⁵, Z⁶ and Zⁿ may, in one or more pairs of two, together with the atoms to which they are bonded, form a carbocyclic, substituted carbocyclic, heterocyclic or substituted heterocyclic group;
- R^{3*} is -OZ⁵, -OC(O)-Z⁵, -NZ⁵-C(O)₂-Z⁶, -NZ⁵(C=O)-NZ⁶Z⁷, -NZ⁵Z⁶, -(C=NOZ⁵)Z⁶, -C(O)NZ^{5*}Z^{6*}, -C(S)NZ^{5*}Z^{6*}, -SZ⁵, -SOZ⁵, -SO²Z⁵, -SO₂NZ⁵Z⁶, -C(O)Z^{3*}-Z^{2*}, halo, alkyl, substituted alkyl, alkenyl, substituted alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo or substituted heterocylco;

Z²* is other than hydrogen when Z³* is heterocyclo;

Z³* is heterocyclo or substituted heterocyclo;

Z^{5*} is substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo; and Z^{6*} is hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo, provided that Z^{6*} is not hydrogen when Z^{5*} is unsubstituted cycloalkyl, unsubstituted aryl, or unsubstituted benzyl; or Z^{5*} and Z^{6*} may together with the nitrogen atom to which they are bonded form a heterocyclic group or substituted heterocyclic group, provided that Z^{5*} and Z^{6*} do not together form unsubstituted piperidinyl, unsubstituted pyrrolidinyl, or unsubstituted morpholinyl;

n and p are independently selected from integers from 0 to 10 wherein, when m is 0, p is also 0;

m is an integer selected from 0 or 1; and q is an integer selected from 1 to 3.

70. (New) A method of treating cognitive disorders comprising administering to a patient in need thereof an effective amount of at least one compound of formula I*

enantiomers, diasteriomers or pharmaceutically acceptable salts thereof, wherein

 X^1 , X^2 and X^3 , together with the atoms to which they are bonded, form a ring selected from:

$$\mathbb{R}^7$$
 \mathbb{N}
 \mathbb{N}

- R^1 , R^2 , R^5 , R^6 and R^7 are independently selected from groups of the formula $-(CH_2)_n-(Z^1)_m-(CH_2)_p-Z^2$;
- R⁴ is alkyl or substituted alkyl;
- Z¹ is -CZ³Z⁴-, -O-, -NZ³-, -S-, -SO-, -SO₂-, -C(O)-, -C(O)Z³-, -C(O)NZ⁴, -C(S)-, -C(=NOZ³)-, alkyl, substituted alkyl, alkenyl, substituted alkynyl, substituted alkynyl, substituted aryl, heterocyclo, or substituted heterocyclo;
- Z² is hydrogen; -OZ⁵, -OC(O)Z⁵, -NZ⁵-C(O)-Z⁶, -NZ⁵-CO₂-Z⁶, -NZ⁵(C=O)-NZ⁶Z⁶, -NZ⁵Z⁶, -NO₂, halo, -CN, -C(O)Z⁵, -CO₂Z⁵, -C(S)Z⁵, -(C=NOZ⁵)Z⁶, -C(O)NZ⁵Z⁶, -C(S)NZ⁵Z⁶, -SZ⁵, -SOZ⁵, -SO₂Z⁵, -SO₂NZ⁵Z⁶, alkyl, substituted alkyl, alkenyl, substituted alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo;
- Z³, Z⁴, Z⁵, Z⁶ and Z⁷ are independently hydrogen, halo, alkyl, substituted alkyl, alkenyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo; or
- Z³, Z⁴, Z⁵, Z⁶ and Zⁿ may, in one or more pairs of two, together with the atoms to which they are bonded, form a carbocyclic, substituted carbocyclic, heterocyclic or substituted heterocyclic group;
- R^{3*} is -OZ⁵, -OC(O)-Z⁵, -NZ⁵-C(O)₂-Z⁶, -NZ⁵(C=O)-NZ⁶Z⁷, -NZ⁵Z⁶, -(C=NOZ⁵)Z⁶, -C(O)NZ^{5*}Z^{6*}, -C(S)NZ^{5*}Z^{6*}, -SZ⁵, -SOZ⁵, -SO²Z⁵, -SO₂NZ⁵Z⁶, -C(O)Z^{3*}-Z^{2*}, halo, alkyl, substituted alkyl, alkenyl, substituted alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo or substituted heterocyclo:
- Z^{2*} is other than hydrogen when Z^{3*} is heterocyclo;
- Z³* is heterocyclo or substituted heterocyclo;
- Z⁵* is substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo; and
- Z⁶* is hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo, provided that Z⁶* is not hydrogen when Z⁵* is unsubstituted cycloalkyl, unsubstituted aryl, or unsubstituted benzyl;
 - or Z^{5*} and Z^{6*} may together with the nitrogen atom to which they are bonded form a heterocyclic group or substituted heterocyclic group, provided that Z^{5*} and Z^{6*} do not

together form unsubstituted piperidinyl, unsubstituted pyrrolidinyl, or unsubstituted morpholinyl;

n and p are independently selected from integers from 0 to 10 wherein, when m is 0, p is also 0;

m is an integer selected from 0 or 1; and q is an integer selected from 1 to 3.

71. (New) A method of treating migraine comprising administering to a patient in need thereof an effective amount of at least one compound of the formula I*

$$\begin{array}{c|c}
R^1 & R^2 \\
X^{1} & & \\
X^{2} & & \\
X^{3} & & \\
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enantiomers, diasteriomers or pharmaceutically acceptable salts thereof, wherein

 X^1 , X^2 and X^3 , together with the atoms to which they are bonded, form a ring selected from:

$$\mathbb{R}^7$$
 \mathbb{R}^6
 \mathbb{R}^7
 \mathbb{R}^7
 \mathbb{R}^7
 \mathbb{R}^7
 \mathbb{R}^7

 R^1 , R^2 , R^5 , R^6 and R^7 are independently selected from groups of the formula - $(CH_2)_n$ - $(Z^1)_m$ - $(CH_2)_n$ - Z^2 ;

R⁴ is alkyl or substituted alkyl;

Z¹ is -CZ³Z⁴-, -O-, -NZ³-, -S-, -SO-, -SO₂-, -C(O)-, -C(O)Z³-, -C(O)NZ⁴, -C(S)-, -C(=NOZ³)-, alkyl, substituted alkyl, alkenyl, substituted alkynyl, substituted alkynyl, substituted aryl, heterocyclo, or substituted heterocyclo;

 $Z^2 \text{ is hydrogen; } -OZ^5, -OC(O)Z^5, -NZ^5-C(O)-Z^6, -NZ^5-CO_2-Z^6, -NZ^5(C=O)-NZ^6Z^7, -NZ^5Z^6, \\ -NO_2, \text{ halo, } -CN, -C(O)Z^5, -CO_2Z^5, -C(S)Z^5, -(C=NOZ^5)Z^6, -C(O)NZ^5Z^6, -C(S)NZ^5Z^6, \\ -NO_2, \text{ halo, } -CN, -C(O)Z^5, -CO_2Z^5, -C(S)Z^5, -(C=NOZ^5)Z^6, -C(O)NZ^5Z^6, -C(S)NZ^5Z^6, \\ -NO_2, \text{ halo, } -CN, -C(O)Z^5, -CO_2Z^5, -C(S)Z^5, -(C=NOZ^5)Z^6, -C(O)NZ^5Z^6, -C(S)NZ^5Z^6, \\ -NO_2, \text{ halo, } -CN, -C(O)Z^5, -CO_2Z^5, -C(S)Z^5, -(C=NOZ^5)Z^6, -C(O)NZ^5Z^6, -C(S)NZ^5Z^6, \\ -NO_2, \text{ halo, } -CN, -C(O)Z^5, -CO_2Z^5, -C(S)Z^5, -C(S)$

- -SZ⁵, -SOZ⁵, -SO₂Z⁵, -SO₂NZ⁵Z⁶, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo;
- Z³, Z⁴, Z⁵, Z⁶ and Z⁻ are independently hydrogen, halo, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo; or
- Z³, Z⁴, Z⁵, Z⁶ and Z⁻ may, in one or more pairs of two, together with the atoms to which they are bonded, form a carbocyclic, substituted carbocyclic, heterocyclic or substituted heterocyclic group;
- R^{3*} is -OZ⁵, -OC(O)-Z⁵, -NZ⁵-C(O)₂-Z⁶, -NZ⁵(C=O)-NZ⁶Z⁷, -NZ⁵Z⁶, -(C=NOZ⁵)Z⁶, -C(O)NZ^{5*}Z^{6*}, -C(S)NZ^{5*}Z^{6*}, -SZ⁵, -SOZ⁵, -SO²Z⁵, -SO₂NZ⁵Z⁶, -C(O)Z^{3*}-Z^{2*}, halo, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo or substituted heterocylco;
- Z^{2*} is other than hydrogen when Z^{3*} is heterocyclo;
- Z³* is heterocyclo or substituted heterocyclo;
- Z⁵* is substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo; and

Z⁶* is hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted

- alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo, provided that Z^{6*} is not hydrogen when Z^{5*} is unsubstituted cycloalkyl, unsubstituted aryl, or unsubstituted benzyl; or Z^{5*} and Z^{6*} may together with the nitrogen atom to which they are bonded form a heterocyclic group or substituted heterocyclic group, provided that Z^{5*} and Z^{6*} do not together form unsubstituted piperidinyl, unsubstituted pyrrolidinyl, or unsubstituted
- n and p are independently selected from integers from 0 to 10 wherein, when m is 0, p is also 0;
- m is an integer selected from 0 or 1; and q is an integer selected from 1 to 3.

morpholinyl;

72. (New) A method of treating epilepsy comprising administering to a patient in need thereof an effective amount of at least one compound of the formula I*

$$X^{1}$$

$$X^{2}$$

$$X^{3}$$

$$X^{3}$$

$$X^{4}$$

$$R^{5}$$

$$R^{4}$$

$$R^{5}$$

$$R^{5}$$

$$R^{1}$$

$$R^{2}$$

$$R^{3*}$$

$$R^{4}$$

enantiomers, diasteriomers or pharmaceutically acceptable salts thereof, wherein

 X^1 , X^2 and X^3 , together with the atoms to which they are bonded, form a ring selected from:

$$\mathbb{R}^7$$
 \mathbb{R}^6
 \mathbb{R}^7
 \mathbb{R}^7
 \mathbb{R}^7
 \mathbb{R}^7
 \mathbb{R}^7

 R^1 , R^2 , R^5 , R^6 and R^7 are independently selected from groups of the formula $-(CH_2)_n-(Z^1)_m-(CH_2)_p-Z^2$;

- Z¹ is -CZ³Z⁴-, -O-, -NZ³-, -S-, -SO-, -SO₂-, -C(O)-, -C(O)Z³-, -C(O)NZ⁴, -C(S)-, -C(=NOZ³)-, alkyl, substituted alkyl, alkenyl, substituted alkynyl, substituted alkynyl, substituted aryl, heterocyclo, or substituted heterocyclo;
- Z^2 is hydrogen; $-OZ^5$, $-OC(O)Z^5$, $-NZ^5-C(O)-Z^6$, $-NZ^5-CO_2-Z^6$, $-NZ^5(C=O)-NZ^6Z^7$, $-NZ^5Z^6$, $-NO_2$, halo, -CN, $-C(O)Z^5$, $-CO_2Z^5$, $-C(S)Z^5$, $-(C=NOZ^5)Z^6$, $-C(O)NZ^5Z^6$, $-C(S)NZ^5Z^6$, $-SZ^5$, $-SO_2Z^5$, $-SO_2NZ^5Z^6$, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo;
- Z³, Z⁴, Z⁵, Z⁶ and Z⁻ are independently hydrogen, halo, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo; or

- Z³, Z⁴, Z⁵, Z⁶ and Z⁻ may, in one or more pairs of two, together with the atoms to which they are bonded, form a carbocyclic, substituted carbocyclic, heterocyclic or substituted heterocyclic group;
- R^{3*} is -OZ⁵, -OC(O)-Z⁵, -NZ⁵-C(O)₂-Z⁶, -NZ⁵(C=O)-NZ⁶Z⁷, -NZ⁵Z⁶, -(C=NOZ⁵)Z⁶, -C(O)NZ^{5*}Z^{6*}, -C(S)NZ^{5*}Z^{6*}, -SZ⁵, -SOZ⁵, -SO²Z⁵, -SO₂NZ⁵Z⁶, -C(O)Z^{3*}-Z^{2*}, halo, alkyl, substituted alkyl, alkenyl, substituted alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo or substituted heterocylco;
- Z^{2*} is other than hydrogen when Z^{3*} is heterocyclo;
- Z³* is heterocyclo or substituted heterocyclo;
- Z⁵* is substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo; and
- Z^{6*} is hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo, provided that Z^{6*} is not hydrogen when Z^{5*} is unsubstituted cycloalkyl, unsubstituted aryl, or unsubstituted benzyl; or Z^{5*} and Z^{6*} may together with the nitrogen atom to which they are bonded form a heterocyclic group or substituted heterocyclic group, provided that Z^{5*} and Z^{6*} do not together form unsubstituted piperidinyl, unsubstituted pyrrolidinyl, or unsubstituted morpholinyl;
- n and p are independently selected from integers from 0 to 10 wherein, when m is 0, p is also 0;
- m is an integer selected from 0 or 1; and q is an integer selected from 1 to 3.
- 73. (New) A method of treating I_{kur}-associated conditions comprising administering to a patient in need thereof an effective amount of at least one compound of the formula I*

$$X^{2}$$

$$X^{3}$$

$$X^{3}$$

$$R^{3*}$$

$$R^{4}$$

$$R^{5}$$

$$R^{5}$$

$$R^{4}$$

enantiomers, diasteriomers or pharmaceutically acceptable salts thereof, wherein

X¹, X² and X³, together with the atoms to which they are bonded, form a ring selected from:

 R^1 , R^2 , R^5 , R^6 and R^7 are independently selected from groups of the formula - $(CH_2)_n$ - $(Z^1)_m$ - $(CH_2)_p$ - Z^2 ;

- Z¹ is -CZ³Z⁴-, -O-, -NZ³-, -S-, -SO-, -SO₂-, -C(O)-, -C(O)Z³-, -C(O)NZ⁴, -C(S)-, -C(=NOZ³)-, alkyl, substituted alkyl, alkenyl, substituted alkynyl, substituted alkynyl, substituted aryl, heterocyclo, or substituted heterocyclo;
- Z² is hydrogen; -OZ⁵, -OC(O)Z⁵, -NZ⁵-C(O)-Z⁶, -NZ⁵-CO₂-Z⁶, -NZ⁵(C=O)-NZ⁶Z⁷, -NZ⁵Z⁶, -NO₂, halo, -CN, -C(O)Z⁵, -CO₂Z⁵, -C(S)Z⁵, -(C=NOZ⁵)Z⁶, -C(O)NZ⁵Z⁶, -C(S)NZ⁵Z⁶, -SZ⁵, -SOZ⁵, -SO₂Z⁵, -SO₂NZ⁵Z⁶, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo;
- Z³, Z⁴, Z⁵, Z⁶ and Z⁷ are independently hydrogen, halo, alkyl, substituted alkyl, alkenyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo; or
- Z³, Z⁴, Z⁵, Z⁶ and Z⁻ may, in one or more pairs of two, together with the atoms to which they are bonded, form a carbocyclic, substituted carbocyclic, heterocyclic or substituted heterocyclic group;

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R^{3*} is -OZ⁵, -OC(O)-Z⁵, -NZ⁵-C(O)₂-Z⁶, -NZ⁵(C=O)-NZ⁶Z⁷, -NZ⁵Z⁶, -(C=NOZ⁵)Z⁶, -C(O)NZ^{5*}Z^{6*}, -C(S)NZ^{5*}Z^{6*}, -SZ⁵, -SOZ⁵, -SO²Z⁵, -SO₂NZ⁵Z⁶, -C(O)Z^{3*}-Z^{2*}, halo, alkyl, substituted alkyl, alkenyl, substituted alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo or substituted heterocylco;

 Z^{2*} is other than hydrogen when Z^{3*} is heterocyclo;

Z³* is heterocyclo or substituted heterocyclo;

Z⁵* is substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo; and

Z⁶* is hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, carbocyclo, substituted carbocyclo, aryl, substituted aryl, heterocyclo, or substituted heterocyclo, provided that Z⁶* is not hydrogen when Z⁵* is unsubstituted cycloalkyl, unsubstituted aryl, or unsubstituted benzyl; or Z⁵* and Z⁶* may together with the nitrogen atom to which they are bonded form a heterocyclic group or substituted heterocyclic group, provided that Z⁵* and Z⁶* do not together form unsubstituted piperidinyl, unsubstituted pyrrolidinyl, or unsubstituted morpholinyl;

n and p are independently selected from integers from 0 to 10 wherein, when m is 0, p is also 0;

m is an integer selected from 0 or 1; and q is an integer selected from 1 to 3.